IN THE CLAIMS

1.   (Previously Presented) A method for transporting data, comprising:

encapsulating data in a frame, wherein the frame comprises a header section, a payload section, and a trailer section, and wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the payload section contains the data;

setting, responsive to the data, the Segment Type field and the Final Payload Count Valid field, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section;

transporting the frame through a communication system; and

extracting from the transported frame, responsive to the Segment Type field and the Final Payload Count Valid field, the data from the payload section.

2.   (Previously Presented) The method for transporting data of claim 1, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field, and wherein extracting the data from the payload section is further responsive to the Final Payload Count field.

3.   (Previously Presented) An apparatus for transporting data, comprising:

means for encapsulating data in a frame, wherein the frame comprises a header section, a payload section, and a trailer section, and wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the payload section contains the data;

means for setting, responsive to the data, the Segment Type field and the Final Payload Count Valid field, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section;

means for transporting the frame through a communication system; and

means for extracting from the transported frame, responsive to the Segment Type field and the Final Payload Count Valid field, the data from the payload section.

4.   (Previously   Presented)   The   apparatus   for transporting data of claim 3, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field, and wherein extracting the data from the payload section is further responsive to the Final Payload Count field.

5.   (Previously Presented)   A computer-readable data structure, encoded on a computer-readable medium, for organizing data for transport, the structure comprising:

a frame comprising a header section, a payload section, and a trailer section;

wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the contents of the Segment Type field and the contents of the Final Payload Count Valid field are responsive to the contents of the payload section, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section.

6.   (Previously Presented)   The computer-readable data structure for organizing data for transport of Claim 5, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field.

7.　(Previously Presented)　A　computer　data　signal embodied in a transmission system, comprising:

a frame for transporting data packets in diverse formats through a transmission system, said frame comprising a header section, a payload section, and a trailer section; and

wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the contents of the Segment Type field and the contents of the Final Payload Count Valid field are responsive to the contents of the payload section, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section.

8.　(Previously Presented)　The computer data signal embodied in a transmission system of Claim 7, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field.

9.   (Currently Amended) A method for transporting data, comprising:

encapsulating data in a ~~frame~~ packet, wherein the ~~frame~~ packet comprises a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section, and wherein the first header section comprises a First Service Type field and the second header section comprises a Second Service Type field, and wherein the first payload section contains a first portion of the data and the second payload section contains a second portion of the data;

setting, responsive to the first portion of the data, the First Service Type field;

setting, responsive to the second portion of the data, the Second Service Type field;

transporting the ~~frame~~ packet through a communication system;

extracting from the transported ~~frame~~ packet, responsive to the First Service Type field, the first portion of the data from the first payload section; and

extracting from the transported ~~frame~~ packet, responsive to the Second Service Type field, the second portion of the data from the second payload section.

10. (Currently Amended) An apparatus for transporting data, comprising:

means for encapsulating data in a ~~frame~~ <u>packet</u>, wherein the ~~frame~~ <u>packet</u> comprises a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section, and wherein the first header section comprises a First Service Type field, and the second header section comprises a Second Service Type Field, and wherein the first payload section contains a first portion of the data, and the second payload section contains a second portion of the data;

means for setting, responsive to the first portion of the data, the First Service Type field;

means for setting, responsive to the second portion of the data, the Second Service Type field;

means for transporting the ~~frame~~ <u>packet</u> through a communication system;

means for extracting from the transported ~~frame~~ <u>packet</u>, responsive to the First Service Type field, the first portion of the data from the first payload section; and

means for extracting from the transported ~~frame~~ <u>packet</u>, responsive to the Second Service Type field, the second portion of the data from the second payload section.

11. (Currently Amended) A computer-readable data structure, encoded on a computer-readable medium, for organizing data for transport, the structure comprising:

a ~~frame~~ packet comprising a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section; and wherein the first header section comprises a First Service Type field and the second header section comprises a Second Service Type field, and wherein the contents of the First Service Type field are responsive to the contents of the first payload section, and the contents of the Second Service Type field are responsive to the contents of the second payload section.

12. (Currently Amended) A computer data signal embodied in a transmission system, comprising:

a frame for transporting data packets in diverse formats through a transmission system, each packet ~~said frame~~ comprising a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section; and

wherein the first header section comprises a First Service Type field and the second header section comprises a Second Service Type field, and wherein the contents of the First Service Type field are responsive to the contents of the first payload section and the contents of the Second Service Type field are responsive to the contents of the second payload section.

13.   (Currently Amended) A method for transporting data, comprising:

encapsulating data in a frame, wherein the frame comprises a header section, a payload section, and a trailer section, and wherein the header section comprises a Forward Tag Congestion Notification field and a Backward Tag Congestion Notification field, the Forward Tag Congestion Notification field providing an indication that congestion is being experienced in a transport direction of the frame, the Backward Tag Congestion Notification field providing an indication that congestion is being experienced in an opposite transport direction of the frame Routing Identification field, and a Source Identification field, and wherein the payload section contains the data;

setting, responsive to a logical frame routing connection, the Routing Identification field the Forward Tag Congestion Notification field;

setting, responsive to a frame origination location, the Source Identification field the Backward Tag Congestion Notification field;

transporting the frame through a communication system; and

extracting from the transported frame the data from the payload section.

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14. (Currently Amended) An apparatus for transporting data, comprising:

means for encapsulating data in a frame, wherein the frame comprises a header section, a payload section, and a trailer section, and wherein the header section comprises a <u>Forward Tag Congestion Notification field and a Backward Tag Congestion Notification field, the Forward Tag Congestion Notification field providing an indication that congestion is being experienced in a transport direction of the frame, the Backward Tag Congestion Notification field providing an indication that congestion is being experienced in an opposite transport direction of the frame</u> ~~Routing Identification field, and a Source Identification field, and wherein the payload section contains the data~~;

means for setting~~, responsive to a logical frame routing connection, the Routing Identification field~~ <u>the Forward Tag Congestion Notification field</u>;

means for setting~~, responsive to a frame origination location, the Source Identification field~~ <u>the Backward Tag Congestion Notification field</u>;

means for transporting the frame through a communication system; and

means for extracting from the transported frame the data from the payload section.

15. (Currently Amended) A computer-readable data structure, encoded on a computer-readable medium, for organizing data for transport, the structure comprising:

a frame comprising a header section, a payload section, and a trailer section; and wherein the header section comprises a <u>Forward Tag Congestion Notification field and a Backward Tag Congestion Notification field, the Forward Tag Congestion Notification field providing an indication that congestion is being experienced in a transport direction of the frame, the Backward Tag Congestion Notification field providing an indication that congestion is being experienced in an opposite transport direction of the frame</u> ~~Routing Identification field and a Source Identification field, and wherein the contents of the Routing Identification field are responsive to a logical frame routing connection, and the contents of the Source Identification field are responsive to a frame origination location~~.

16.   (Currently Amended) A computer data signal embodied in a transmission system, comprising:

a frame for transporting data packets in diverse formats through a transmission system, <u>each packet</u> ~~said frame~~ comprising a header section, a payload section, and a trailer section; and

wherein the header section comprises a <u>Forward Tag Congestion Notification field and a Backward Tag Congestion Notification field, the Forward Tag Congestion Notification field providing an indication that congestion is being experienced in a transport direction of the packet, the Backward Tag Congestion Notification field providing an indication that congestion is being experienced in an opposite transport direction of the packet</u> ~~Routing Identification field and a Source Identification field, and wherein the contents of the Routing Identification field are responsive to a logical frame routing connection and the contents of the Source Identification field are responsive to a frame origination location~~.

17.   (Currently Amended) The method for transporting data of claim 1, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for ~~transport;~~ <u>transport.</u>

18. (Currently Amended) The apparatus for transporting data of claim 3, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for ~~transport;~~ transport.

19. (Currently Amended) The computer-readable data structure for organizing data for transport of Claim 5, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for ~~transport;~~ transport.

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20. (Currently Amended) The computer data signal embodied in a transmission system of Claim 7, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for ~~transport;~~ <u>transport.</u>